

Claims

1. A zirconium-based alloy, suitable for use in a  
5 corrosive environment, where it is subjected to increased  
radiation, comprising 0.5-1.6 percentage by weight Nb and  
0.3-0.6 percentage by weight Fe, characterised in that it  
comprises 0.5-0.85 percentage by weight Sn.
- 10 2. A zirconium-based alloy according to claim 1,  
characterised in that the content of Sn in the alloy is  
larger than or equal to 0.65 percentage by weight.
3. A zirconium-based alloy according to claim 1 or 2,  
15 characterised in that it comprises up to 0.2 percentage by  
weight Ni.
4. A zirconium-based alloy according to any one of the  
claims 1-3, characterised in that it comprises up to 0.6  
20 percentage by weight Cr.
5. A zirconium-based alloy according to any one of the  
claims 1-4, characterised in that the total content of Nb  
and Sn is larger than or equal to 1.15 percentage by weight.  
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6. A zirconium-based alloy according to any one of the  
claims 1-5, characterised in that the alloy constitutes at  
least a part of a component in a nuclear energy plant.
- 30 7. A zirconium-based alloy according to claim 6,  
characterised in that said component constitutes a part of a  
fuel assembly.
8. A component in a nuclear energy plant, characterised in  
35 that it comprises an alloy according to any one of the  
claims 1-5.

9. A component according to claim 8, characterised in that  
it constitutes a part of a fuel assembly.

5 10. A component according to claim 8 or 9, characterised in  
that it defines a cladding tube for nuclear fuel.

10 11. A component according to claim 10, characterised in  
that at least a part of the inner circumference of the  
component comprises a layer of a material which is more  
ductile than said alloy.

15 12. A component according to claim 11, characterised in  
that said layer comprises a zirconium-based alloy with a  
total content of alloying elements which does not exceed 0.5  
percentage by weight.